

LCD COLOR TV USER'S MANUAL

TL3220

Part No: IES041201

English

WELCOME TO THE Wonderful World

Dear customer,

Thank you for choosing this LCD color TV. We expect our product and service will comfort you for long. This manual is to guide you to set up and operate your TV as quickly as possible. Please read all the safety and operation instructions carefully before you begin and follow that the handbook tells, which we recommend, though we also provide Brief Operating Instructions.

SAFETY CLASS This is an IEC safety class I product and must be grounded for safety.

CONTENTS

Important safety instructions	2
Brief operating instructions	
Preparation for your new TV	6
Selecting a location for the TV	
Learning about your TV	6
Connecting your TV	7
Connecting to A/V equipments	
Connecting to a computer	
Connecting to an antenna	
Connecting to a cable converter box	
Using the remote control	10
Preparing the remote control for use	10
Learning about the remote control	11
Using the TV features	12
Understanding the TV features	12
Basic operations	12
Using the PRESET menu	14
Using the PICTURE PARAMETERS menu	14
Using the AUDIO SETTINGS menu	15
Using the FUNCTION SETTINGS menu	15
Using the PC PARAMETERS menu	17
Using the VCHIP SETUP menu1	18
Using the PIP menu	19
Universal Remote Control User's Manual	20
Appendix	38
Cleaning and care	38
Troubleshooting	39
Specifications	40
Limited Warranty	41

Hisense





CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK).NO USERSERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the TV.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the users authority to operate this equipment.

WARNING: TO PREVENT FIRE OR SHOCKHAZARD, DO NOTEXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: The monitor shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the Monitor.

CAUTION: Do Not Place This LCD TV on an unstable cart, stand, or table. The LCD TV may fall, causing serious injury to a child or adult, and serious damage to the LCD TV. Use only with a cart or stand recommended by the manufacturer, or sold with the LCD TV.

CAUTION: The installation on the wall which was made from of concrete has passed the safety test of UL.

IMPORTANT SAFETY INSTRUCTIONS

- 1. READ THESEINSTRUCTIONS
- 2. KEEPTHESE INSTRUCTIONS
- 3. HEED ALL WARNINGS
- 4. FOLLOWALL INSTRUCTIONS

5. DO NOTUSE THIS APPARATUS NEAR WATER

Do not use this TV near water. For example, do not use near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like. The LCD Monitor shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the LCD Monitor.

6. CLEAN ONLY WITH DRY CLOTH

Unplug the TV from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

7. DO NOT BLOCK ANY VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

Slots and openings in the cabinet back or bottom are provided for ventilation, to ensure reliable operation of the TV and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the TV on a bed, sofa, rug, or other similar surface. This TV should never be placed near or over a radiator or heat resource. This TV should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

IMPORTANT SAFETY INSTRUCTION

- 8. DO NOTINSTALL NEAR ANYHEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDE AMPLIFIERS) THAT PRODUCE HEAT.
- 9. DO NOT DEFEAT THE SAFETY PURPOSE OF THE POLARIZED OR GROUNDING-TYPE PLUG. A POLARIZED PLUG HAS TWO BLADES WITH ONE WIDER THAN THE OTHER. A GROUNDING TYPE PLUG HAS TWO BLADES AND A THIRD GROUNDING PRONG. THE WIDE BLADE OR THE THIRD PRONG ARE PROVIDED FOR YOUR SAFETY. IF THE PROVIDED PLUG DOES NOT FIT INTO YOUR OUTLET, CONSULT AN ELECTRICIAN FOR REPLACEMENT OF THE OBSOLETE OUTLET.
- 10. PROTECT THE POWER CORD FROM BEING WALKED ON OR PINCHED PARTICULARLY AT PLUGS, CONVENIENCE RECEPTACLES. AND THE POINT WHERE THEY EXIT FROM THE APPARATUS.
- 11. ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.
- 12. USE ONLY WITH CART, STAND, TRIPOD, BRACKET, OR TABLE SPECIFIED BY THE MANUFACTURER, OR SOLD WITH THE APPARATUS. WHEN A CART IS USED, USE CAUTION WHEN MOVING THE CART/APPARATUS COMBINATION TO AVOID INJURY FROM TIP-OVER.

Do not place this TV on an unstable cart, stand, tripod, bracket, or table. The TV may fall, causing serious injury to someone, and serious damage to the appliance. An TV and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the TV and cart combination to overturn.



13. UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

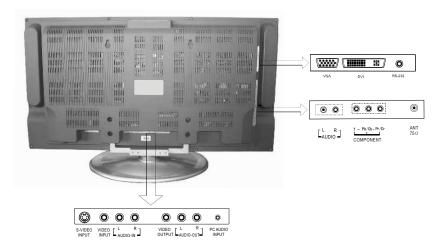
For added Protection for this TV receiver during a lightning storm, or when it is left unattended and unused for long period of time, unplugit from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV due to lightning and power line surges.

14. REFERALL SERVICING TO QUALIFIED SERVICE PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGEDIN ANYWAY, SUCH AS POWER-SUPPLY CORD OR PLUGIS DAMAGED, LIQUID HAS BEEN SPILLED OR OBJECTS HAVE FALLEN INTO THE APPARATUS, THE APPARATUS HAS BEEN EXPOSED TO RAIN OR MOISTURE, DOES NOT OPERATE NORMALLY, OR HAS BEEN DROPPED.

Brief Operating Instructions

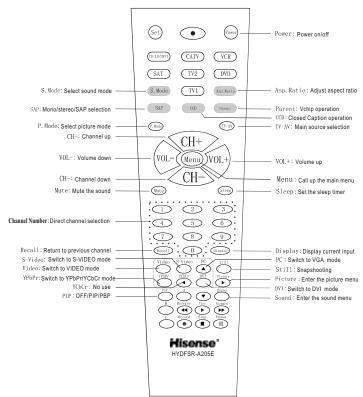
1.Connection

Connect the antenna lead or CATV cable or external equipments(such as Antenna, Cable TV, VCD, DVD, VTR, Set top box, etc.) to the corresponding terminals or interface on the TV rear(please refer to the owner's manual of the equipment to be connected as well) and confirm that the signal source is available and works normally.



2. The remote control

Open the back battery cover on the remote control and install two AAA size batteries and then close the battery cover.



NOTE: This remote control is all-purpose, these buttons which not be explained are independent of the TV.

Brief Operating Instructions

3.Switching on/off

- 1)Connect the TV to power outlet, the power indicator will be red and then turn blue. Several seconds later, TV picture will display on the screen.
- 2)Press stand by button on the machine or the [Power] button on the remote control to turn off the TV.

4. Signal source selection

Press the number [1-9] button or [CH- or CH+] button to select TV input; press the [VIDEO] button to select VIDEO input; press the [S-VIDEO] button to select S-VIDEO input; press the [YPbPr] button to select YPbPr/YCbCr input; press the [PC] button to select PC input; press the [DVI] button to select DVI input.

5.Air/Cable selection

You can select the signal receiving method according to the following steps:

- 1) Press the [MENU] button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PRESET.
- 3) Press the [CH- or CH+] button to select the item RF INPUT.
- 4) Press the [VOL- or VOL+] button to change the item from among Air, CATV(STD), CATV(HRC) and CATV(IRC).

6.Channel search

- 1) Press the [MENU] button to enter the main menu.
- 2) Press the [yoL- or yoL+] button to select the item PRESET.
- 3) Press the [CH- or CH+] button to select the itemAuto_search.
- 3) Press the [VOL+] button to start auto_searching.

7. Picture parameters adjustment

- 1) Press the [MENU] button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item Picture Parameters.
- 3) Press the [CH-] or CH+] button to select the item you want to adjust.
- 4) Press the [VOL- or VOL+] button to adjust the level.

8.AUDIO SETTINGS

- 1) Press the [MENU] button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item AUDIO SETTINGS.
- 3) Press the [CH- or CH+] button to select the item you want to adjust.
- 4) Press the [VOL- or VOL+] button to adjust the level.











SHARPNESS

AUTOSEARCH

Note: All buttons mentioned above are on the remote control unless indicated otherwise.

Selecting a location for the TV

- 1)Place the TV on the floor or on a sturdy platform in a location where light does not directly hit the screen.
- 2)Place the TV far enough from the walls to allow proper ventilation. Inadequate ventilation may cause overheating, which may damage the TV.

NOTE: Please contact local dealer for wall mounting.

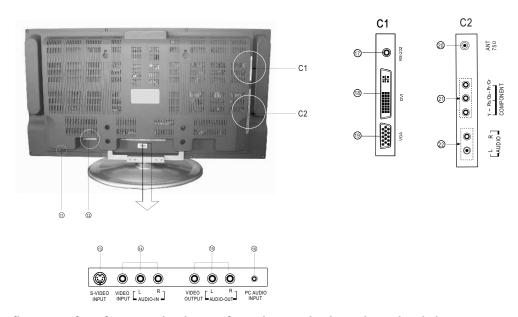
Learning about your TV

You can operate your TV by using the buttons on the front panel or the remote control. The terminals on the back panel provide all the connections you will need to connect other equipment to your TV.

Front Controls



Back Connections



Note: The above figures are for reference only, please refer to the actual units to determine their appearance.

- 1 Remote sensing window
- 2 Power indicator
- 3 Headphone output
- 4 Menu button
- 5 Source select
- 6 Volume down / cursor left
- 7 Volume up / cursor right
- ® Channel down / cursor down

- 10 Power button (standby)
- ① Power Switch(ON/OFF)
- 12 AC Power Socket
- (3) S-Video input
- 4 AV input
- (5) AV output
- (6) PC audio input
- TRS232C DEBUG input
- 18 DVI input

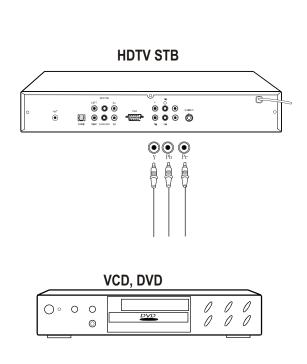
- 19 PC VGAinput
- ② CATV antenna input
- 2 Y/PbPr/YCbCr input
- 22 Audio input

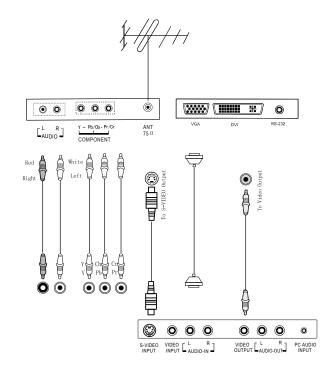
Connecting your TV

Caution: Do not plug the TV in until you have finished connecting all of your equipment.

Connecting to A/V equipments

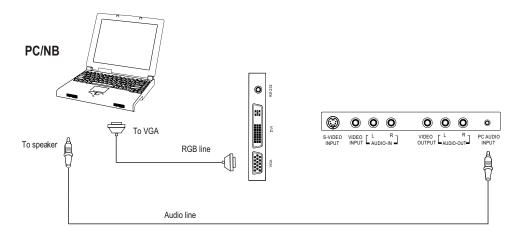
To enjoy its multimedia features, you can connect your TV to A/V equipments such as VCR, DVD, STB, Satellite receiver, Camcorder, Audio amplifier etc., and select signal sources using your remote control. Connect the devices as shown below.





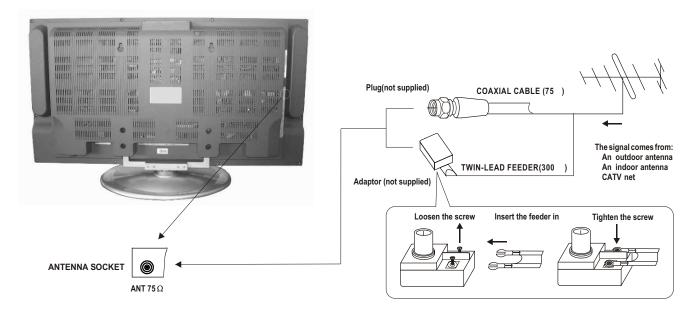
Connecting to a Computer

You can use your TV as a monitor/speakers for your computer by connecting through its 15pin standard RGB interface and PC audio interface. Connect the devices as shown below.



Connecting to an antenna

To enjoy the terrestrial signal transmitted by your local TV station, you need an indoor or outdoor antenna (not supplied). Perfect picture quality requires a good signal and generally means that an outdoor antenna must be used. The exact type and location of the antenna will depend on your particular area. Consult your local dealer or service personnel for best advice. If you are a subscriber of your local CATV net, the outdoor or indoor antenna is not needed. Connect the equipments as the following figure.



Connecting to a cable converter box

This television has an extended tuning range and can tune most cable channels without using a cable company supplied converter box. Some cable companies offer premium pay channels in which signal is scrambled. Descrambling these signals for normal viewing requires the use of a descrambler device which is generally provided by the cable company.

For subscribers to Basic Cable TV Service

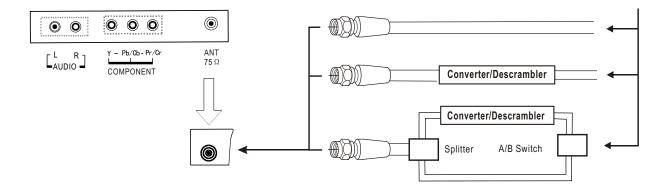
For basic cable service not requiring a Converter/Descrambler box, connect the CATV 75 ohm Coaxial Cable directly to the Antenna Jack on the back of the television.

For subscribers to Scrambled Cable TV Service

If you subscribe to a cable service which requires the use of a Converter/Descrambler box, connect the incoming cable to the Converter/Descrambler box and connect the output of the box to the Antenna Jack on the back of the television. Follow the connections shown below. Set the television to the output of the Converter/Descrambler box(usually channel 3 or 4) and use the Converter/Descrambler box to select channels.

For Subscribers to Unscrambled Basic Cable with Scrambled Premium Channels

If you subscribe to a cable service in which basic cable channels are unscrambled and premium channels require the use of a Converter/Descrambled box, you may wish to use a two-set signal splitter(sometimes called[two set coupler) and an A/B Switch box from the cable installer or an electronics supply store. Follow the connections shown below. With the switch in the **B** position, you can directly tune any nonscrambled channels on your TV. With the switch in the **A** position, tune your TV to the output of the Converter/Descrambler box(usually channel 3 or 4) and use the box to tune scrambled channels.



Note:

When you use a converter box with your TV, there may be features that you cannot program using the remote control.

Using the remote control

Preparing the remote control for use

Installing the remote control batteries

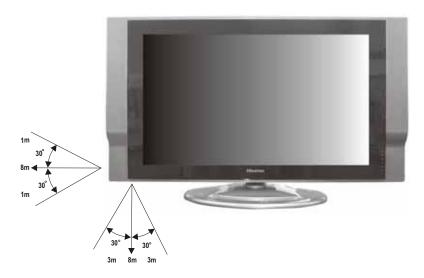
1. Open the battery cover on the back of the remote control.



- 2. Install two AAA size(1.5V) batteries. Match the + and signs on the batteries to the signs on the battery compartment.
- 3. Close the battery cover.

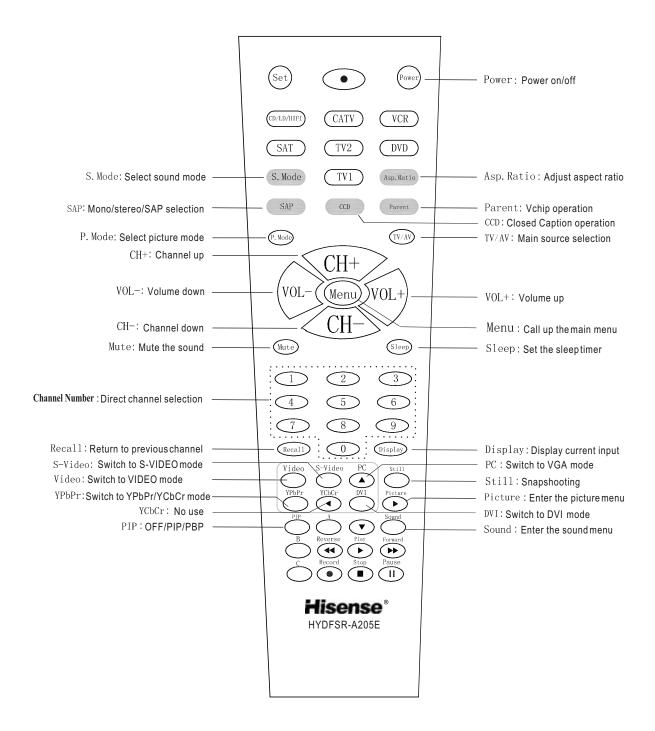
Note:

- 1.Dispose of your batteries in a designated disposal area. Do not throw batteries into fire.
- 2.Do not mix battery types or combine used batteries with new ones.
- 3. Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- 4.If you do not intend to use the remote control for a long time, remove the batteries.
- 5. The effective range of remote control is suggested in the figure.



Using the remote control

Learning about the remote control



NOTE: This remote control is all-purpose, these buttons which not be explained are independent of the TV.

Understanding the TV features

- Multimedia TV receiver, Video monitor and PC display, all in one.
- Wider viewing angle, 16:9 display over 150° viewing angle, 16:9 ergonomical display panel
- Digital display device truthfully reproducing the images, without distortion or blurring, irrespective of magnetic or geomagnetic effect.
- 181 channels selection
- Closed caption decoder You may view specially labelled (cc) TV programs, movies, news. prerecorded tapes, etc. with either a dialogue caption or text display added to the program.
- V-chip Enables parents to prevent their children from watching inappropriate programs on TV.
- BTSC/SAP
- Full function universal remote control
- Sleep/wake timer
- Multi-language OSD

Basic Operations

Power ON/OFF

- 1. Connect the TV to power outlet, the power indicator will be red and then turn blue. Several seconds later, TV picture will display on the screen.
- 2. Press stand by button on the machine or the POWER button on the remote control to turn off the TV temporarily.
- that you unplug the power from the outlet.

POWER 3. If you decide to shut off the TV for a long time, it is recommended POWER BUTTON **INDICATOR** (STANDBY)

Signal source selection

Press the [CH- or CH+] button to selectTV input; press the [VIDEO] button to select VIDEO input; press the [S-VIDEO] button to select S-VIDEO input; press the [YPbPr] button to select YPbPr/YCbCr input; press the [PC] button to select PC input; press the [DVI] button to select DVI input. Press the TV/AV button or source on themachinecan switch among VGA/DVI/S-VIDEO/AV/TV/YPB PR.Press[CH+ or CH-] to select mode, then press [VOL+] to switch to select mode you want to select.

DISPLAY	INPUT TERMINAL
VGA	D-Sub15
DVI	DVI-D
S-VIDEO	S-Video
AV1	Composite Video
TV	Antenna
YPBPR	YP _B P _R /YC _B C _R

Select channels by [CH-/CH+]

You can also use [CH- Or CH+] to select channels. [CH+] indicates channel number increase; [CH-] indicates channel number decrease.

Select channels by numbers

To select a channel: Press the channel numbers in series to select channel directly.

For example, to seclect channel 120, Press the button 1, and 1-- will display on the top right corner of the screen, then press the button 2, 12- will display, press the button zero, you can enjoy the program of channel 120.

Adjust Volume

When menu is not displayed on the screen, press [VOL- or VOL+] to adjust the volume.

Use PIP button

Press the PIP button to select the OFF/PIP/PBP.

Use [RECALL] button

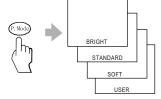
Press the [RECALL] button repeatedly to alternate between the present channel and the previous channel.

Display channel number

3 seconds after power on or changing channels, the channel number disappears from the screen. Press [DISPLAY] button to display the present channel number, but it will also disappear 3 seconds after your pressing.

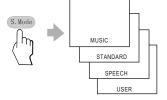
Select picture modes

You can select the picture mode from among three preset modes and one user-set mode. Press the [P MODE] button repeatedly to select the desired picture mode.



Select sound modes

You can select the sound mode from among three preset modes and one user-set mode. Press the [S MODE] button repeatedly to select the desired sound mode.



Use [STILL] button

Press the [STILL] button to snapshot the present picture, and press any button to return to normal watching.

Use [Asp.Ratio] button

Press the [Asp.Ratio] button to adjust the screen aspect ratio

Mute function

Press [Mute] button repeatedly to switch between mute and unmute mode.

Using the PRESET menu

POSITION

- 1) Press the [MENU] button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PRESET..
- 3) Press the [CH- or CH+] button to select POSITION.
- 4) Press the [VOL- or VOL+] button to select the present channel.



RF INPUT AUTO_SEARCH

SKIP

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PRESET.
- 3) Press the [CH- or CH+] button to select SKIP.
- 4) Press the [VOL- or VOL+] button to skip or unskip the present channel.

NOTE: The 'skipped' channels cannot be accessed by [CH- or CH+], but you can access them by digit (direct select) button.

RF INPUT

You can set RF INPUT for different incoming RF signals.

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PRESET.
- 3) Press the [CH- or CH+] button to select RF INPUT.
- 4) Press the [VOL- or VOL+] button to switch from among Air, CATV(STD), CATV(HRC), and CATV(IRC).

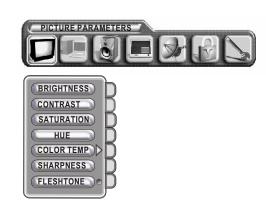
AUTO-SEARCH

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PRESET.
- 3) Press the [CH- or CH+] button to select AUTO_SEARCH.
- 4) Press the [VOL+] button to start auto_searching.

Using the PICTURE PARAMETERS menu

Adjust picture parameters

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item PICTURE PARAMETERS.
- 3) Press the [CH- or CH+] button to select the item you want to adjust.
- 4) Press the [VOL-or VOL+] button to adjust the level.
- 5) The adjusted data is stored automatically in the user mode.



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Using the AUDIO SETTINGS menu

Adjust audio settings

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item audio settings.
- 3) Press the [CH- or CH+] button to select the item you want to adjust.
- 4) Press the [VOL- or VOL+] button to adjust the level.
- 5) The adjusted data is stored automatically in the user mode.



BTSC / SAP

You can enjoy watching TV while you listen to high-fidelity stereo sound with the BTSC feature. BTSC can also transmit a second audio program(SAP) containing a second language or other audio information.

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item audio setting.
- 3) Press the [CH- or CH+] button to select BTSC.
- 4) Press the [VOL+] button to enter BTSC, Press the [CH- or CH+] button to select the item you want to adjust, You may select from among Mono, Stereo and SAP, Press the [VOL+] button to select the item you want to adjust NOTE: By pressing the [SAP] button, you can acquire the same effects.

Using the FUNCTION SETTINGS menu

CCD CONTROL

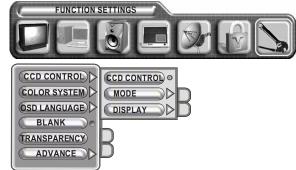
You have two options with the closed caption feature: captions or text.. A caption is a printed version of the dialogue, narration and/or sound effects of a TV program. Text is information not related to what is appearing on the TV screen.

CCD CONTROL

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item FUNCTION SETTINGS, Press the [CH- or CH+] button to select the CCD CONTROL and press the [VOL+] to enter CCD CONTROL menu.
- 3) Press the [CH- or CH+] button to select the CCD CONTROL.
- 4) Press the [VOL+] button to select CCD CONTROL or not.

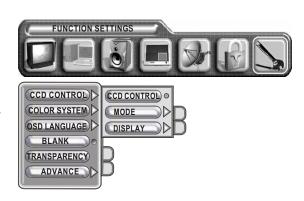
MODE

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item FUNCTION SETTINGS, Press the [CH- or CH+] button to select the CCD CONTROL and press the [VOL+] to enter CCD CONTROL .
- 3) Press the [CH- or CH+] button to select the MODE.
- 4) Press the [VOL+] button to enter MODE menu .Press the [CH- or CH+] button to select your desired mode and press the [VOL+] button to confirm.



DISPLAY

- 1) Press the MENU button to enter the main menu.Press the [VOL- or VOL+] button to select the FUNCTION SETTINGS.
- 2) Press the [CH- or CH+] button to select the item CCD CONTROL, and press the [VOL+] to enter CCD CONTROL menu.
- 3) Press the [CH- or CH+] button to select the DISPLAY.
- 4) Press the [VOL+] button to enter DISPLAY menu ,Press the [CH- or CH+] button to select background between BOX and SHADOW. Press the [VOL+] button to confirm.



LANGUAGE

- 1) Press the MENU button to enter the main menu.
- 2) Press the [vol_- or vol_+] button to select the item Function settings.
- 3) Press the [CH- or CH+] button to select the OSD LANGUAGE.
- 4) Press the [vol+] button to enter OSD language menu and change OSD language from among English, Espanol and Francais. Press the [vol+] button to confirm.

BLANK

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item Function settings.
- 3) Press the [CH- or CH+] button to select the BLANK.
- 4) Press the [VOL- or VOL+] button to select the BLANK or not.

TRANSPARENCY

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item Function settings.
- 3) Press the [CH- or CH+] button to select the TRANSPARENCY.
- 4) Press the [VOL- or VOL+] button to adjust the transparency of the OSD.

ADVANCE

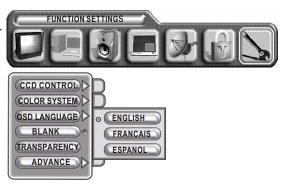
- 1) Press the MENU button to enter the main menu.
- 2) Press the[VOL- or VOL+] button to select the item Function settings.
- 3) Press the [CH- or CH+] button to select the ADVANCE.
- 4) Press the [VOL+] button to enter the ADVANCE menu , press the [CH- or CH+ button and [VOL+] to select.

MADI: The abbreviation of Motion Adaptive De-Interlacing. When this function is on, the areas that are not moving in a image will be fully static and the objects that are moving will have a smooth edge.

CCD CONTROL
COLOR SYSTEM
OSD LANGUAGE
BLANK
MADI
TRANSPARENCY
ADVANCE
LADI
O

FILM MODE: For some special signal, turnning on the FILM MODE will make the image moving more glidingly.

NOTE: The disable items will turn gray.



Using the PC PARAMETERS menu

AUTO

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the pc parameters.
- 3) Press the [CH- or CH+] button to select the item AUTO, and press the [VOL+] to adjust the picture position.





CLOCK

- 1) Press the MENU button to enter the main menu.
- 2) Press the [v_{OL} or v_{OL} +] button to select the pc parameters.
- 3) Press the [$_{CH-}$ or $_{CH+}$] button to select the item clock, and press the [$_{VOL-}$ or $_{VOL+}$] to adjust the clock parameters.

PHASE

- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the pc parameters.
- 3) Press the [CH- or CH+] button to select the item phase, and press the [VOL- or VOL+] to adjust the phase parameters.

POSITION

- 1) Press the MENU button to enter the main menu.
- 2) Press the [vol- or vol+] button to select the pc parameters.
- 3) Press the [CH- or CH+] button to select the item position, and press the [vol- or vol+] to adjust the horizontal position parameters. and press the [CH- or CH+] to adjust the vertical position parameters.

AUTO COLOR

- 1) Press the MENU button to enter the main menu.
- 2) Press the [vol- or vol+] button to select the pc parameters.
- 3) Press the [CH- or CH+] button to select the auto color, and press the [VOL+] to adjust the picture color .

NOTE: When you find the screen is abnormal in the condition of the PC source, you can select the AUTO and AUTO COLOR, then press the [VOL+] button, the screen would become black for some seconds, and then return normal.

Using the VCHIP SETUP menu

VCHIP SETUP

VCHIP enables parents to prevent their children from viewing certain programs or channels.

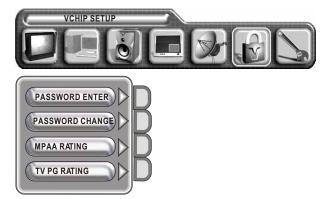
- 1) Press the MENU button to enter the main menu.
- 2) Press the [VOL- or VOL+] button to select the item VCHIP SETUP.



Password is a four-digit number. The preset password is 1111.

You must enter password to access the next two operations.

1) Press the [CH- or CH+] button to select PASS WORD ENTER, and press the [VOL+] to enter ENTER the Vchip PASSWORD.





CHANGE PASSWORD

- 1) Press the [CH- or CH+] button to select PASSWORD CHANGE.
- 2) Input the new password and Confirm the password. You succeed in changing the password.



MPAA RATTING/TV PG RATTING

- 1) Press the [CH- or CH+] button to select MPAA RATING or TV RATING, and press[VOL+] to enter it.
- 2) Press the [CH- or CH+] button to select the rating.
- 3) Press the [VOL+] button to confirm

NOTE: As you block ratings, all ratings higher than the ones you select are blocked as well. For example, if you choose to block the MPAA rating R, the higher ratings, NC-17 and X, are automatically blocked too.

About MPAA Ratings

The Motion Picture Association of America (MPAA) uses a rating system to qualify motion picture content. Television broadcasters employ a rating system to qualify the content of televison programs as well. The MPAA and TV ratings work with the V-CHIP feature and allow you to block out programming above the rating limits you determine.

Rating	Defined as
NA	Rating not applicable
G	General audience
PG	Parental Guidance suggested
PG-13	Parents strongly cautioned
R	Restricted
NC-17	No one 17 and under admitted
Х	Adult audience only

About TV Ratings

The TV ratings are divided into two groups: age-based and content-based.

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Age	Defined as
NONE	Rating not applicable
TV-Y	All children
TV-Y7	Directed to older children
TV-G	General audience
TV-PG	Parental Guidance suggested
TV-14	Parents Strongly cautioned
TV-MA	Mature Audience only

Contents	Defined as
V	Violence
S	Sexual situations
L	Strong language
D	Suggestive dialogue
ALL	Above rating applicable

Using the PIP menu

- 1) Press the MENU button to enter the main menu, Press the [$_{VOL-}$ or $_{VOL+}$] button to select the PICTURE IN PICTURE.
- 2) Press the $[CH-or_{CH+}]$ button to select the PIP size, and press the $[vo_{L+}]$ button to enter the PIP size, Press the $[CH-or_{CH+}]$ button to select the OFF/PIP/PBP.Press the $[vo_{L+}]$ button to confirm.
- 3) Press the [CH- or CH+] button to select the PIP source, and press the [VOL+] button to enter the PIP source, Press the [CH- or CH+] button to select the pip source. Press the [VOL+] button to confirm.
- 4) Press the [CH-orCH+] button to select the PIP position or PIP brightness or contrast, Press the [VOL- or VOL+] button to adjust brightness and contrast. Press the [VOL+] button to enter the PIP position Press the [CH-orCH+] and [VOL- or VOL+] button to adjust



position.Press the [CH-orCH+] and [VOL- or VOL+] button to adjust the vertical and horizontal position.

Note: 1) When main picture is TV/ VIDEO/S-VIDEO. PIP picture is HDTV/PC/DVI.

2) When main picture is HDTV/PC/DVI. PIP picture is TV/VIDEO/S-VIDEO

Universal Remote Control User's Manual

Application: Universal Remote Control for TV, VCR, SAT, Cable TV, Hi-Fi Audio System, DVD, STB etc.

Application Manual

MANUAL SETTING

- 1.Look up the three-digit code for your brand and type of device in the Code Tables, then turn on the device.
- 2. Press and hold the SET key then press the DEVICE Key, then the indicator lights will turn on.
- 3. Press the three-digit code for your device. Each time LED blinks one time.
- 4. Press Device Key. The activity indicator should flash, then turn off to indicate that the code is accepted.

Note: If no key on your remote is pressed for 10 seconds, the programming process will stop automatically, and you will have to start over.

QUICK POWER SCAN (AUTO FIND) SETTING

- 1. Turn on the device you want the remote to control, and point the remote toward it.
- 2. Press and hold the SET key then press the DEVICE Key, then the indicator lights will turn on.
- 3. Press the SET key again, the indicator light will flash.
- 4. Press the POWER once at a time (setup counter up) until the device turns OFF.
- 5. Press the SET key to change the scan direction.
- 6.If device is turn off then press DEVICE key (any), then indicator should flash and turn off to indicate that the code is accepted.

Note: If no key on your remote is pressed for 30 seconds, the programming process will stop automatically, and you will have to start over.

If the code is not match with your device, then repeat step 1-6.

POWER SCAN CONCEPTS

- 1. During the power scan mode, If you press and hold POWER, the power code data is transmitted continuously.
- 2. During the power scan mode, If you press and release SET, the power code data is transmitted one time in reverse direction.
- 3. During the power scan mode, If you press and release DEVICE Key, the current code data is selected.

TEST THE SELECTED CODE

- 1.Press SET and Digit 1, LED will be flashing. The flashing time is stand for the 1st digit of the selected code. E.g.: Code=547, LED will be flashing 5 times.
- 2.Press SET and Digit 2, LED will be flashing,. The flashing time is stand for the 2nd digit of the selected code. E.g.: Code=547, LED will be flashing 4 times.
- 3.Press SET and Digit 3, LED will be flashing,. The flashing time is stand for the 3rd digit of the selected code. E.g.: Code=547, LED will be flashing7 times.

Code Table

CD	CODE
ADC	133
ADO	134
Aiwa	054, 118, 135
Akai	136
Atle	070
Caabletime	000, 001, 002
Caravell	095
Denon	022, 137, 039, 041
Dynatech	119
Emerson	120
Fisher	021, 121, 139, 140
GE	141
Haitai	023
Hitachi	122
Inkei	016
Inkel	142
JBL	096
JVC	078, 123, 143
Karcher	024
Kenwood	025, 053, 124, 144, 145
Lenco	058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 073, 024, 074
Luxman	146
Luxor	004
Magnavox	028, 049, 077
Marantz	125, 147
MCS	148
Mission	028
Mitsubishi/MGA	149, 150
Nakamichi	152, 153
NEC	026
Onkyo	086, 154, 088, 155, 126
Optimus	156, 157, 158
Panasonic	127
Philips	027, 028, 042, 077, 035, 036, 037, 040
Pioneer	029, 030, 159
Proton	028
Radiotone	024
RCA	128
Rotel	028, 055, 057
SAE	028
Sansui	076
Sanyo	077, 166
Sharp	025, 041
Sherwood	160
Sony	031, 032, 048, 080, 129, 138, 161, 038, 091, 090
Sylvania	028, 077
Teac	081, 164, 162, 163
Technics	033, 130
Toshiba	151
Victor	078
Yamaha	085, 131, 132, 165

LD	CODE
Kenwood	045
Magnavox	044
Panasonic	046
Philips	034
Pioneer	044
RCA	075
Sony	048
Toshiba	044
Zenith	043

Brand of HIFI	CODE
Fisher	005
Hitachi	006
Kenwood	003, 007, 008,009, 010
Lenco	068, 069, 070, 071, 072, 073, 074
Nordmende	024
Onkyo	011, 012
Panasonic	013
Pioneer	020
Sanyo	014
Sharp	007
Sherwood	015, 016, 050, 051
Sony	090
Technics	017
Yamaha	018, 019

Brand of RCVR	CODE
Denon	106, 110, 111
JVC	102, 115
Kenwood	101, 104, 100
Magnavox	103
Marantz	107
Onkyo	109, 113
Panasonic	117
Philips	107
RCA	103
Sansui	112
Sharp	105, 111
Sony	098
Teac	116
Technics	114
Yanaha	099, 108

Brand of DVD	CODE
Aiwa	087, 118, 041, 058, 153
Ames	136
Apex	115, 122, 127
Atle	041
BBG	000
Classic	136
Daewoo	076, 107, 109
Denon	005, 135, 078
Elta	116, 121
GE	106
Govideo	123
Harman Kardon	073, 125
Hisense	145, 146
Hitachi	007, 075, 131, 103, 154
Integra	138
JVC	006, 071, 088, 128, 019, 150, 155
KLH	009
Konka	089, 090, 133, 134, 137, 141
Lasonic	117
Lenco	039, 040, 041, 042, 043, 044, 045
Magnaox	080, 092, 093, 002, 102, 020, 018, 015, 149
Marantz	102
Mitsubishi/MGA	068, 081, 111,148
Mustek	136
NAD	142
Nakamichi	139
Optimus	075, 103
Oritron	119
Others	011,064
Panasonic	001, 005, 108, 091, 018, 017
Philco	003, 060
Philips	002, 102, 113, 092, 093, 080, 023, 018, 149
Pionner	082, 075, 103, 078, 054, 029, 147, 152
Proscan	004, 079, 101, 151
Radioshack	104, 143, 144
RCA	104, 106, 143, 144, 114, 101, 079, 004, 046, 151
Rotel	026, 027
Sampo	124
Samsung	072, 077
Sansui	017
Sanyo	094, 110, 018, 020
SEG	129
Sharp	010, 085
Sherwood	120, 021, 022
Shinco	013, 106
Skyworth	059
Sony	083, 095, 096, 112, 061, 019, 021, 014, 033, 034, 157
Sylvania	018
Teac	075, 103, 022, 055
Technics	005, 023
Theta Digital	075, 103
Thomson	012
Toshiba	002, 084, 097, 098, 100, 126, 015, 062, 156
Victor	019, 063
Wharfedale	140
Yamaha	005, 070, 105, 056, 130
Zenith	008, 002, 099, 086, 110, 014
L	1

Brand of VCR	CODE
Admiral	089, 094, 212
Aiko	124, 258
Aiwa	073, 098, 104, 185
Akai	001, 002, 032, 033, 070, 071, 101, 107, 108, 109, 110, 165, 166, 167, 244, 164, 181, 236, 000
Alba	046, 010
American High	087, 120
Amstrad	073
Anitech	010, 034
ASA	011, 054
Asha	114
Audio Dynamics	111, 112
Audiosonic	010
Audiovox	104
Baird	002, 004, 046
Baur	014, 054
Beaumark	114
Bell&howell	095, 099
Blaupunkt	003, 005, 006, 035, 081
Brionvega	012
Brocksonic	094, 113, 123, 178, 222, 186, 245, 248
Bush(UK)	014, 075
Calix	104
Candle	114, 115, 116, 117, 118
Cannon	240, 087, 120, 121
Capehart	119
Carver	090
CCE	105, 124, 272, 258
CGE	020, 083, 073
Citizen	104, 114, 115, 116, 117, 118, 124, 258
Colortyme	111
Colt	105, 272
Crown	046
Curtis Mathes	087, 098, 237, 111, 114, 117, 120, 121, 122, 168
Cybernex	114
Daewoo	046, 115, 116, 118, 123, 245, 258
Dansai	010, 011
DBX	111, 112
Decca	026, 054
Decca(UK)	007, 073, 054
	073, 058, 039, 054
Degraaf Dimensia	106
Dixi	016
Dual	004
Dumont Dynatech	073, 039, 540 073, 098
Dynatron	011
Electrohome	036 104, 125, 080
Electrohome	
Electrophonic	104
Elin	018
Emerex	086
Emerson	076, 073, 011, 051, 094, 098, 104, 251, 259, 264, 237, 238, 185, 245, 246, 182, 113, 115, 120, 122,
	123,125, 270, 126,271, 202, 203, 178, 214,221, 222, 223,127, 128, 129,131, 133, 134,135, 136,
	137, 138,139, 149, 163, 196, 167, 169, 170, 176, 080

Erros	011
Erres Ferguson	011 030
Fidelity	073
Finlandia	039, 054
Finlandia	
Firstline	007, 073, 029,002, 039, 020,011, 054 010
Fisher	
Formenti -Phoeix	009, 020, 039, 037, 095, 096, 097, 099, 140, 141, 142, 283, 197, 204, 229, 266
Fuji	011, 054 087, 092, 120, 236
Funai	073, 098, 221, 264
GBC	010
GE	087, 098, 106, 114, 120, 121, 143, 168, 230, 261
GEC(UK)	007, 054
Geloso	010
Goldstar /LG	104, 011, 014, 036
Goodmans	075, 046, 073, 018, 010
Govideo	098, 102, 211, 235, 242
Gradiente	098, 100
Granada	054
Granada(UK)	003, 007, 081, 014, 058, 039, 020, 012, 054, 085
Grundig Grundig	054
Hanseatic	007, 014, 054
Harley Davidson	098
Harman/Kardn	036, 090, 111
Harwood	105, 272
HCM	010
Headpuarter	095
Hinari	010, 015, 016, 075, 074
HI-Q	229
Hitachi	004, 010, 014, 017, 073, 098, 226, 187, 188, 193, 144, 145, 164, 165
Imperial	083, 018, 073
Ingersol	016
Inno Hit	018, 010, 054
Instant Replay	120, 264
Interfunk	007, 019, 054
Irradio	011, 010
ITT	039, 020
ITT-Nokia	001, 004, 019,081, 020, 021,002
Jc Penney	111, 112, 114, 120, 121, 146, 164, 283, 188, 193, 268
JCL	120
Jensen	144, 145, 165, 188
JVC	001, 004, 021,042, 043, 044,047, 030, 100, 111, 112,117, 165,171, 180, 228,008
Karcher	014, 018, 054
KEC	104
Kendo	002
Kenwood	020, 104, 111, 112,117, 165,171, 008
KLH	105, 272, 219
Kodak	087, 104, 120
Lenco	046
LG(Goldstar)	111, 117
Lloyd s	098, 073
Loewe Opta	003, 007, 081054
Logik	016, 015, 018, 010, 272, 045, 074, 075
Luma	015
Luxor	014, 020, 002
	X X X X

LVI(agana)	005 007 008 104
LXI(sears) M Electroine	095, 097, 098, 104 073
	054
Magnadyne	
Magnasonic	020
Magnavox	087, 088, 090,098, 103, 120, 121, 147, 162,282, 172, 241,190
Magnin	114
Manesh	011
Marantz	003, 007, 011, 036, 054,087, 090, 114, 120, 121,148, 186, 240
Mark	011
Marta	011
Matsui	016, 015, 051,014, 011
Matsushita	087, 120
MEI	087, 120
Memorex	011, 073, 058, 039, 020, 087, 089, 090, 091, 094, 098, 099, 101, 104, 181, 229, 114, 120, 121, 162, 212
Metz	003, 006, 081, 082
Mga	080
Mgn Tech	114
Minerva	003, 006, 081
Minolta	144, 145, 164, 188, 193
Mitsubishi/MGA	007, 010, 043, 054, 089, 205, 179, 215, 224, 232, 188, 253, 008, 082, 167, 104, 125, 149, 080
Montgomery Ward	212, 247
Motorola	087, 089, 212
MTC	073, 018
Multitech	010, 046, 073, 054, 098, 105, 230, 114, 143, 272
Murphy	073
Mutitech	075
N.E.I.	011, 054
NAD	076
NEC	004, 036, 043, 237, 186, 254, 192, 111, 112, 117, 148, 150, 151, 152, 165, 171, 008
Neckermann	001, 004, 007, 014, 015, 081, 018, 020, 054
Nikko	104
Nikon	093
Nobliko	003, 081
Nokia	039, 020
Nordmende	001, 004, 049, 021, 024, 043, 042, 044, 047
Olympus	058, 161, 242, 247
Orion	015, 051, 045, 074, 016, 094, 178
Osaka	073
Osaki	011, 073,010
Others	064, 078, 013, 023, 025, 028, 084, 048, 050, 052, 056, 062, 063, 065, 079, 067, 068, 069, 072
Otto Versand	007, 014, 054
Palladium	002, 070
Panasonic	005, 019, 035, 087, 101, 120, 121, 173, 174, 175, 249, 195, 269
Penney	036, 087, 104
Pentax	017, 144, 145, 164, 188, 193
Pentax Research	117
Perdio	073
Philico	120, 121, 147,094, 087
Philips	007, 029, 053, 054, 055, 081, 087, 090, 103, 104, 120, 121, 161, 172, 195, 194, 231, 183,
	184, 241, 247, 190, 257
Philips/Magnavox	183, 194
Phonda	007, 054
Pilot	011, 104
	007, 043, 053, 055, 076, 077, 008, 054, 206, 216, 188, 112, 144, 273, 274, 171
Pioneer	

Portland	116 119
	116, 118
PRE	043
Proline	073
Proscan	106
Pulsar	088, 162
PYE	054
Quarter	095
Quartz	020
Quasar	087, 120, 121, 173, 249, 195
Quelle	003, 006, 007, 015, 026, 081, 018, 011, 054
Radio Shack/Realistic	114, 120, 121, 125, 140, 141, 161, 080
Radioshack	197, 204, 212, 181, 229
Randex	104
RCA	057, 089, 247, 256, 261, 262, 195, 188, 249, 255, 260, 193, 261, 262, 233, 239, 155, 156, 199, 207,
	106, 107, 114, 120, 121, 144, 145, 153, 154, 209, 217, 173, 157, 158, 159, 275, 276, 164, 168
Rdix	104
Realistic	073, 058, 018, 039, 020, 011, 087, 089, 094, 095, 097, 098, 099, 104, 195, 229, 197, 204, 212,
-	181, 247, 256, 262
Replay	269
REX	004, 021, 042
Ricoh	093
Runco	
	088, 162
SABA	001, 004, 049, 021, 043, 042, 044
Saisho	076, 016, 015, 051, 045, 074
Salora	014, 020
Samsung	018, 054, 114, 115, 143, 144, 271, 166, 130, 181, 182, 230, 242, 244, 188
Sanky	088, 089, 162,212
Sansui	043, 094, 098, 105, 225, 112, 277, 165, 171, 008
Sanyo	020, 039, 095, 097, 099, 104, 114, 229
SBR	054
Schneider	007, 010, 018, 073, 011, 054, 075
Scott	113, 115, 123, 126, 131, 149, 169, 222, 223, 245, 197, 204, 229, 188, 193, 266
Sears	038, 087, 096, 097, 099, 098, 104, 283, 120, 140, 141, 142, 144, 145, 164, 268
SEG	010, 018
SEI-Sinudyne	016
Seleco	032
Senta	083
Sharp	058, 089, 116, 125, 160, 161, 212, 247, 250, 256, 080
Shintom	105, 227, 236, 188, 070, 010, 145, 272, 075
Shogun	114
Siemens	003, 006, 020
Singer	105, 120, 272
Sinudyne	007, 016, 054
Sonoko	046
Sony	026, 057, 059, 060, 061, 027, 073, 086, 087, 092, 093, 098, 278, 243, 189, 263, 200, 132, 177,
	220, 236, 210
STS	120, 164, 188, 193, 040
Sunkai	051
Sunstar	073
Sylvania	073, 087, 090, 098, 213, 221, 241, 264, 120, 121, 147, 149, 172
_	
Symphonic	073, 098, 264, 221
Tandberg	015, 045
Tandy	095
Tashiko	073, 058, 104

Tashiro	104
Tatung	007, 073, 054, 165
TEAC	073, 165
Technics	087, 120
Teknika	073, 011, 087, 098, 104, 257, 208, 120, 121, 279, 284
Telefunken	001, 004, 021, 041, 042, 044, 049
Telemeister	073
Tenosal	010
Thomas	098
Thomson	001, 004, 021, 043, 047
Thorm	030
Thorn-Ferguson	001, 004, 030, 042, 049
Tivo	197, 263
TMK	015, 237, 259, 114, 122, 139
Tonsai	010
Toshiba	004, 021, 188, 115, 140, 142, 144, 149, 169, 031
Toterision	018, 011, 104, 114
Uher	004, 018
Unitech	018, 114
Vector	036
VectorResearch	036, 111,112, 115
Victor	043, 047, 112
Video	036
Video Concepts	111, 112, 115, 167
Videosonic	105, 114
Wards	087, 089, 097, 098, 104, 105, 229, 212, 218, 193, 188, 247, 280, 281, 164, 169, 114, 115, 120, 121, 120, 120
	125, 144, 145, 272, 161, 075, 080
Weltblick	011
White Weatinghouse	011, 094,264
Xenon	015, 045
XR-1000	087, 098, 105, 120, 272
Yamaha	036, 095, 198, 111, 112, 117, 165
Yoko	018, 011
Zenith	088, 092, 093, 094, 098, 162, 265, 201, 267, 180, 248, 234, 236, 252, 191

	Г
Brand of AUX	CODE
A mark	018, 023
ABC	074
Akai	025
Alleron	026
Anam	023
Aoc	023
Archer	023
Audio Dynamics	021
Audiovox	023
Autovox	035
AWA	051
Beko	052
Bell&howell	026
Blaupunkt	036
Brionvega	044
Broksonic	023
Cabletime	054
Candle	019
Capehart	016, 017
Carver	020
Chaparral	049
Citizen	017, 019
Concerto	019
Coronado	018
Crosley	020
Crown	018
Daewoo	048
Daytron	017
DBX	021
Denon	065, 041
Dumont	016
Electrohome	019
Emerson	018, 017, 026
Filmnet	046
Fujitsu	026
Funai	026, 24
GE	017
Gibralter	016, 018, 020,019
Grunpy	026
Hallmark	017
Hitachi	018, 019
Infinity	020
JBL	020
Jensen	025
JVC	025, 021
Kamp	016
Kenwood	025, 021, 069
KMC	018
KTV	018
Lenco	053, 057
Loewe Opta	037
-	019
Luxman	
Luxor	038
LXI	024
LXI(Sears)	020
Magnavox	018, 020, 017, 026, 024
Marantz	021, 20
Megatron	023
Memorex	024, 017, 019

Metz	039, 371
Mitsubishi	016, 017, 065, 370, 026
MTC	016, 019
NAD	065
NEC	016, 019, 026, 021
Nordmende	040
Oceanic(F)	041
Omega	022
Orion	017
Others	047, 028, 031, 032
Panasonic	020, 67
Penney	021, 020, 017
Philco	016, 018
Philips	016
Pionner	021, 065
Portland	016, 018
Praxis	050
Proton	017, 023
Quasar	067
RCA	016
Realistic	024, 019
Rediffusion	042
Samsung	016, 018, 017, 019, 348
Sansui	016, 025, 021
Scott	017, 026
Sears	018, 020, 017, 016, 019
Sharp	018, 045
Signal	022
Signature	018, 017, 026
Signature 2000	016,024
Sony	066, 067, 048, 375
Soun Design	017, 026
Spectravision	023
SSS	016
Starcom	022
Stargate	022
Starquest	022
Supreme	020
Sylvania	020
Symphonic	024
Tatung	043, 025
Teac	025, 024
Technes	067
Technovision	055
Techwood	019
Teknika	016, 018, 019,020, 026
Telerent	018
TMK	017, 019
Toshiba	379
tusa	022
Vector Research	021
Victor	025, 021
Video Concepts	021
Vidtech	016, 017
Wards	016, 020, 017, 026, 019, 024, 018
37 1	
Yamaha	025, 021, 016
Yamaha Yorx Zonda	

Brand of TV	CODE
A mark	318,360
Aasic Line	144
Abex	374
Accuscan	105,331,336,339,362
Admiral	032,136,243,246,257,253,331,336,347,381,464,487
Aire	363
Aiwa Akai	225,424,471,222 005,045,085,087,140,168,224,247,319,354,382
Alba	031
Albiral	001,009
Alleron	344,512
Amark	553
Ambassador	359
Amenicaction	240
Amstrad	006,204,359,551
Atron Anam	185 105,240,321,339,360
Anam National	455,504,586,484,185
AOC	045,241,319,354,360,373,383,456,520,489,089,081
Archer	360,553
Aristona	149
Arthur	107
ASA	007,009,013,024,026,032,091,107,114,136,142
Audinac	276
Audiosonic Audiovox	141
Augiovox	105,240,244,339,360,185 007,008,024, 091
Autovox	004,007,012,015,024, 041,075,076,091,097,114,134,591
AWA	033.140.141.169
Baird	143
BCR	005,032,115,046,064
BEKO	151
Bell & Howell	105,381,408,098
Blaupunkt	010,018,020,053,065,085,208
Bradford Brandt	105,240.339,185 005,032,115,046,064,072
Brionvega	097,136
Broksonic	103,243,247,256,345,350,360,519,530
Bruns	139
BSR	016,019,021,033,219
Bush(UK)	022,107,031
Cabletime	212
Candle	045,353,354,376,383,450,501,081,074
Capehart Carver	316,334
Celebrity	235,327 231,365,382,087
Centruion	334
Century	128,129,136
CGE	007,019,023,024,033,091,128,133,150,151,
CGM	090
Changhong	124,141,173,502
Citizen	045,204,233,475,506,449,450,451
Claritone	241,489
Clarivox Classic	001, 009,147,148 502
Colortyme	250,319,384,457,552,081,060,101
Concerto	081
Concierge	566
Conte/Cony	385,489,572
Contec	022,103, 219,339,355,240
Contec/Cony	070,185
Continental	005,032,115,046,064
Craig	318 105,240,262,263,264,265,339,185
Craig Crosley	024,025,045,128,136,235
Crown	105,233,240,265,318,339,449
CTC Clatronic	093
Curtis Mather	380,386,449
Curtis Mathes	045,204,247,261,265,331,333,336,348,354,233,237,235,560,503,506,081,135,096
CXC	105,240,339
Daewoo	149,204,233,244,247,277,278,282,313,363,370,372,373,428,449,
	454,459,540,528,465,544,557,089,081

	204.004.440.001
Daytron	204,334,449,081
Decca(UK)	002,004,026,028,031
Degraaf	107
Denon	237
Dimensia	315,380,560,096
Dorig Dual	110 041,221
Dual-Tec	004,011,019,029,033
Dumont	007,024,091,136,566,316
Dynatech	377.222
Edison	005,032,115,046,064
Elbe	001,009
Electroband	365,231,382,489,087
Electroband	333,335,365,484,583,481,388
Elite	099
Elman	019.029.033
Emerson	129,136,105,204,103,123,233,239,240,243,247,258,262,263,264,265,283,318,319,333,334,
	337,338,339,343,344,345,350,355,359,482,504,545,512,489,490,385,390,391,392,393,394,
	395,396,397,449,451,452,505,507,555,510,511,561,426,398,399,401,400,523,524,530,
	475,534,476,578, 222,070,062,185,186,188,229,217,211,203,200 ,485,486,554,551,491,
Envision	045,354,374
Europhon	000,004,019,029,030,033,036, 129
Fenner	033,173,207
Ferguson	009,005,032,042,046,064,115
Fidelity(UK)	003,107
Filmnet	214
Finlandia	107,138
Finlux	007,008,009,013,024,025,026,029,034,091,114,142,150,199
Fisher	025,035,041,136,148,151,221,238,267,324,333
Formenti	107,192
Formenti-Phoenix	003,007,008,024,025,036,037,091,107,140
France Telecom	228
Frontech	107
Fujitsu	239,344,512,533
Funai	016,141,219,105,005,032,115,046,064,240,339,344,371,239,551,512,476,222
Futuretech	105,240,339
Garrard	222
GBC	002,004,019,025,026,031,033,038,039,040,041,107,138,155
GE	236,321,322,329,331,334,366,481,492,493,560,570,573,574,484,388,447,380,096
GEC(UK)	155
Gelos o	004,019,025,032,033,038,131,132,107
General Electric	246,247,251,286
Genexxa	107
Gibralter	045,316,354,441,385,566
Goldstar/LG	003,004,007,024,033,042,045,077,091,134,153,204,218,318,319,328,334,348,354,
0 1	316,267,583,520,526,513,247,256,272,287,290,291292,089,070
Goodmans	109
Gorenje	151,154
Gradiente	234
Graeta	107 002,004,007,024,027,040,043,044,046,047,048,091,107,110,138,085
Granada(UK)	
grosley	
Grundia	007,024,091
Grundy	003,007,010,018,020,024,044,049,050,052,053,065,077,091
Grundy	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512
Grundy Grunpy	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344
Grundy Grunpy Hanseatic	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091,
Grundy Grunpy Hanseatic Hantarex	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000
Grundy Grunpy Hanseatic Hantarex Harley Davidson	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339 056
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339 056 033,043,057,058,059,127,138
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339 056 033,043,057,058,059,127,138 014,017,078,080,086,095,593,106,121,145,176,180,184,187, 194,195,198,202,205,
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harward Hem-mermann Hinair Hisense	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339 056 033,043,057,058,059,127,138 014,017,078,080,086,095,593,106,121,145,176,180,184,187, 194,195,198,202,205, 206,210,213,227,588,589,590,591,592
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harward Hem-mermann Hinair Hisense	003,007,010,018,020,024,044,049,050,052,053,065,077,091 449,512 105,239,339,344 007,024,025,027,036,043,051,054, 091, 000 222 235 105,339 056 033,043,057,058,059,127,138 014,017,078,080,086,095,593,106,121,145,176,180,184,187, 194,195,198,202,205, 206,210,213,227,588,589,590,591,592
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair Hisense	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274,317,318,343,480,500,567,467,529,479, \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harward Hem-mermann Hinair Hisense	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274317,318,343,480,500,567,467,529,479, \\ 222,434,440,452,385,437,438,439,402,435,436,430,431,432,433 \\ \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair Hisense Hitachi	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274,317,318,343,480,500,567,467,529,479, \\ 222,434,440,452,385,437,438,439,402,435,436,430,431,432,433 \\ 003,004,007,024,033,091,134,173 \\ \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair Hisense Hitachi Hyper Ima	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274317,318,343,480,500,567,467,529,479, \\ 222,434,440,452,385,437,438,439,402,435,436,430,431,432,433 \\ 003,004,007,024,033,091,134,173 \\ 105,339 \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harman/kardon Harvard Hem-mermann Hinair Hisense Hitachi Hyper Ima Imperial	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274,317,318,343,480,500,567,467,529,479, \\ 222,434,440,452,385,437,438,439,402,435,436,430,431,432,433 \\ 003,004,007,024,033,091,134,173 \\ 105,339 \\ 007,019,023,024,033,091,128,133,150,151 \\ \end{array}$
Grundy Grunpy Hanseatic Hantarex Harley Davidson Harward Hem-mermann Hinair Hisense Hitachi Hyper Ima Imperial Infinity	$\begin{array}{c} 003,007,010,018,020,024,044,049,050,052,053,065,077,091 \\ 449,512 \\ 105,239,339,344 \\ 007,024,025,027,036,043,051,054,091, \\ 000 \\ 222 \\ 235 \\ 105,339 \\ 056 \\ 033,043,057,058,059,127,138 \\ 014,017,078,080,086,095,593,106,121,145,176,180,184,187,194,195,198,202,205, \\ 206,210,213,227,588,589,590,591,592 \\ 004,026,029,030,039,040,041,043,046,054,061,063,064,065,066,070,108,155, \\ 199,209,237,247,273,274317,318,343,480,500,567,467,529,479, \\ 222,434,440,452,385,437,438,439,402,435,436,430,431,432,433 \\ 003,004,007,024,033,091,134,173 \\ 105,339 \\ 007,019,023,024,033,091,128,133,150,151 \\ 235,327 \end{array}$

Interfunk	005,007,024,027,039,044,051,067,068,069,071,091,136
Irradio	008,007,024,038,042,059,091,134,226
ITT	007,024,031,063,091,127,154,
ITT-Nokia	005,007,024,032,039,040,044,048,063,067,068,069,072,073,091,127,143,149,154,158
Janco	215,216
JBL	235,327
JC Penny	096,089,074,135,130,380,388,403,449,458,506,493,560,570,481,573,579,272,247,251
JCB	365,231,382,087
Jensen	378
JVC	070,109,127,159,167,168,270,271,346,234,445,385,404,405,493,527,477,
Kaisui Kamp	007,024,091,144 105,316,339
Kamp	007,024,026,091,140,144,156
Karcher	355,382,087
KEC	240
Kendo	129
Kennedy	025,075,076
Kenwood	045,354,583
Kloss	371,376
Kloss Novabeam	450,501,536,546
KMC	318
Konka	038, 141,173,509,514,525,531
Korting	036, 043,136,138,192
KTV	105,204,045,233,241,247,265,275,276,318,319,339,352,354,489,478,475,451,406,449
Lenco	033,038,164,207
Lenoir	004
LG(GOLDSTAR)	444
Lloyd	222
Loewe Opta	051,137,169,191,209,593,255,571
Logik	028,336,408
Luma	032,079
Luxman	333,347
Luxor	005,007,010,018,024,026,044,046,054,066,082,083,084,091,143,158
LXI(Sears)	235,246,247,255,256,261,267,293,326,327,331,341,351,342,380,560,570,222,096
Magnadyne	000,019,025,029,056,131,132,136
Magnafon	000,003,007,008,024,029,030,036,091
Magnavox	045,239,242,247,255,256,284,288,318,327,328,332,334,344,353,354,371,235,
37.1	546,536,474,508,515,477,583,584,470,472
Majestic	327,408
Marantz	026,027,045,235,266,319,327,335,354
Martin	107 004,005,006,028,031,032,040,046,064,085,115,163,170,352
Matsui Maximal	
Mcmichael	057,127 155
Megatron	237,317,360
MEI	489
Melectronic	221
Memorex	243,245,333,334,335,336,562,507,512,381,408,222
Metz	018,034, 085,088,132,136, 144, 164
MGA	045,245,481,583,512,388,407
Midland	204,233,236,316,493,566,570,441,449
Minerva	010,007,018,024,044,050,052,065,085,091,
Minutz	366,573
Mitsubishi/MGA	005,032,043,045,046,051,064,089,109,113,115,136,162,163,245,344,224,334,335,
	354,373,388,407,427,563,481,512,583,477,247,256,266,307,315,319
Mivar	000,003,007,024,090,091,092,223
MTC	045,241,348,354,377,506,489,222,089,135
Multisystem	140
Multitech	040,093,105,151,153,240,339,352,377,222
Multivision	409,495
Murphy	058
	0.40,110
Murphy(UK)	040,110
N.E.I.	147
N.E.I. NEC	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101
N.E.I. NEC Neckermann	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151
N.E.I. NEC Neckermann Nikkai	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137
N.E.I. NEC Neckermann Nikkai Nikko	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363
N.E.I. NEC Neckermann Nikkai Nikko Nobliko	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129
N.E.I. NEC Neckermann Nikkai Nikko Nobliko Nokia	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129 007,024,058,063,091,127,154
N.E.I. NEC Neckermann Nikkai Nikko Nobliko Nokia Nordmende	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129 007,024,058,063,091,127,154 088,168,065,097,166
N.E.I. NEC Neckermann Nikkai Nikko Nobliko Nokia Nordmende Noshi	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129 007,024,058,063,091,127,154 088,168,065,097,166 232
N.E.I. NEC Neckermann Nikkai Nikko Nobliko Nokia Nordmende Noshi NTC	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129 007,024,058,063,091,127,154 088,168,065,097,166 232 363
N.E.I. NEC Neckermann Nikkai Nikko Nobliko Nokia Nordmende Noshi	147 165,045,247,256,315,319,334,354,375,477,552,484,457,089,101 004,026,043,054,079,094,151 137 045,354,363 003,007,008,024,029,050,091,129 007,024,058,063,091,127,154 088,168,065,097,166 232

Onwa	105,240,339
Optimus	279
Optonica	347,362,487,171
Orion	005,006,016,028,031,032,046,056,064,085,099,103,105,115,167,168,169,
	224,239,243,334,339,345,566507,211
Osume	022
Otto Versand	025,027,043,051,054,065
Pael	003, 007,008,,024,091
Palladium	177
Panasonic	001,003,019,036,039,065,100,102,104,170,208,251,260,289,290,308,321,322,
	327,358,478,493,484,569
Penny	232,233,236,319,325,327,328,329,334,341,342,353,354
Perdio	024,091,007,033,149
Philco	019,023,024,025,133,136,150,151,577,237,243,247,255,273,277,309,318,319,
	327,341,354,371,235,546,536,474,484,583,385,074,070
Philips	003,026,027,071,136,070,172,173,174,074,228,209,024,091,007,149,141,005,032,
	115,046,064,155,235,255,284,288,296,297,298,312,327,328,332,356,357,483,484,
	583,385,536,472,387,516,425,460,515, 543,546,477,584,585,488
Philips/Magnavox	387,389,543,585,488
Phonola	149,156
Pice Club	268
Pilot	204,233,354,449
Pioneer	000,027,065,612,261,279,343,349,410,411,452,556
Polestar	192
Portland	204,233,247,252,315,318,363,449
Prandoni-Prince	007,008,024,032,091,129
Praxis	606
Precision	521
Price Club	506
Prism	290
Prosat	001
Proton	334,360,385,412,522,577,580,070
Pulsar	005,316,319,336,566,441
Quasar	251,289,321,322,493,478,569,484,406
Quelle	004,005,007,008,009,010,013,024,026,027,028,032,044,046,049,050,051,
	058,064,065,067,091,114,115,199,134
Radio Shack	105,204,233,246,256,266,294,339,362,374,222
Radio Shack/Reallistic	380,385,449,535,560,561,583
Radiola	005,032,046,064,115,209,
Radiomarelli	005,032,115,046,064
Radionette	026,058
Rank(UK)	022
RBM(UK)	022,091
RCA	182,157,189,232,236,542,559,564,570,484,535,537,538,581,583,574,575,532,380,
	415,429,452,453,454,383,459,461,413,414,496,517,547,549,096,161,160
RCA/Proscan	025,246,247,248,249,251,252,285,286,287,319,331,340,343
Realistic	045,105,204,233,320,333,338,339,354,222,171
Rediffusion	005.032.040.046.064.115.154.110
REX	
D1 1	011,021,032,075,076,127
Rhapsody	489,241
Roadstar	489,241 038
Roadstar Rotel	489,241 038 022
Roadstar Rotel Runco	489,241 038 022 3165,566,441
Roadstar Rotel Runco SABA	489,241 038 022 3165,566,441 000,005,032,046,064,065,072,082,088,107,115,136,166
Roadstar Rotel Runco SABA Saccs	489,241 038 022 3165,566,441 000,005,032,046,064,065,072,082,088,107,115,136,166 009
Roadstar Rotel Runco SABA Saccs Saisho	489,241 038 022 3165,566,441 000,005,032,046,064,065,072,082,088,107,115,136,166 009 004,006,028,031,085,102,163
Roadstar Rotel Runco SABA Saccs Saisho Salora	489,241 038 022 3165,566,441 000,005,032,046,064,065,072,082,088,107,115,136,166 009 004,006,028,031,085,102,163 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230,
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230,\!000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354,\!49 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230,\!000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354,\!355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 022,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsung Samsux Sansui Sanyo	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354,\!355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \\ 238,\!250,\!265,\!267,\!295,\!324,\!323,\!333,\!418,\!448,\!558,\!125 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \\ 238,\!250,\!265,\!267,\!295,\!324,\!323,\!333,\!418,\!448,\!558,\!125 \\ 149,\!155 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo SBR Schneider	$\begin{array}{c} 489,241 \\ 038 \\ 022 \\ 3165,566,441 \\ 000,005,032,046,064,065,072,082,088,107,115,136,166 \\ 009 \\ 004,006,028,031,085,102,163 \\ 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230, \\ 000,004,007,008,024,029,030,036,042,091 \\ 045,204,233,354,449 \\ 026,033,042,140,141,151,156,190,193,204,208,247,256,268,296,318,334,348,354, \\ 355,497,503,506,518,583,385,386,417,449,416,458,462,152,130,146 \\ 204,233 \\ 045,243,348,354,362,507,519 \\ 013,022,026,031,043,058,063,072,109,110,111,112,113,143,148,151,163,175,183, \\ 238,250,265,267,295,324,323,333,418,448,558,125 \\ 149,155 \\ 005,007,011,015,019,024,025,032,033,035,037,039,041,046,064,091,115,127,149,221,226 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsung Samsung Sansui Sanyo SBR Schneider Scotch	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \\ 238,\!250,\!265,\!267,\!295,\!324,\!323,\!333,\!418,\!448,\!558,\!125 \\ 149,\!155 \\ 005,\!007,\!011,\!015,\!019,\!024,\!025,\!032,\!033,\!035,\!037,\!039,\!041,\!046,\!064,\!091,\!115,\!127,\!149,\!221,\!226 \\ 250,\!319 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsung Samsux Sansui Sanyo SBR Schneider Scotch Scott	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \\ 238,\!250,\!265,\!267,\!295,\!324,\!323,\!333,\!418,\!448,\!558,\!125 \\ 149,\!155 \\ 005,\!007,\!011,\!015,\!019,\!024,\!025,\!032,\!033,\!035,\!037,\!039,\!041,\!046,\!064,\!091,\!115,\!127,\!149,\!221,\!226 \\ 250,\!319 \\ 103,\!105,\!239,\!240,\!265,\!256,\!334,\!339,\!344,\!345,\!348,\!512,\!490,\!385,\!391,\!211 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsung Samsung Sansui Sanyo SBR Schneider Scotch	$\begin{array}{c} 489,241 \\ 038 \\ 022 \\ 3165,566,441 \\ 000,005,032,046,064,065,072,082,088,107,115,136,166 \\ 009 \\ 004,006,028,031,085,102,163 \\ 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230, \\ 000,004,007,008,024,029,030,036,042,091 \\ 045,204,233,354,449 \\ 026,033,042,140,141,151,156,190,193,204,208,247,256,268,296,318,334,348,354, \\ 355,497,503,506,518,583,385,386,417,449,416,458,462,152,130,146 \\ 204,233 \\ 045,243,348,354,362,507,519 \\ 013,022,026,031,043,058,063,072,109,110,111,112,113,143,148,151,163,175,183, \\ 238,250,265,267,295,324,323,333,418,448,558,125 \\ 149,155 \\ 005,007,011,015,019,024,025,032,033,035,037,039,041,046,064,091,115,127,149,221,226 \\ 250,319 \\ 103,105,239,240,265,256,334,339,344,345,348,512,490,385,391,211 \\ 235,239,318,323,324,325,326,327,331,333,334,344,238,380,404,506,512,551, \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo SBR Schneider Scott Sears	$\begin{array}{c} 489,\!241 \\ 038 \\ 022 \\ 3165,\!566,\!441 \\ 000,\!005,\!032,\!046,\!064,\!065,\!072,\!082,\!088,\!107,\!115,\!136,\!166 \\ 009 \\ 004,\!006,\!028,\!031,\!085,\!102,\!163 \\ 005,\!046,\!047,\!054,\!063,\!064,\!066,\!067,\!073,\!079,\!083,\!094,\!127,\!138,\!143,\!158,\!175,\!215,\!216,\!230, \\ 000,\!004,\!007,\!008,\!024,\!029,\!030,\!036,\!042,\!091 \\ 045,\!204,\!233,\!354,\!449 \\ 026,\!033,\!042,\!140,\!141,\!151,\!156,\!190,\!193,\!204,\!208,\!247,\!256,\!268,\!296,\!318,\!334,\!348,\!354, \\ 355,\!497,\!503,\!506,\!518,\!583,\!385,\!386,\!417,\!449,\!416,\!458,\!462,\!152,\!130,\!146 \\ 204,\!233 \\ 045,\!243,\!348,\!354,\!362,\!507,\!519 \\ 013,\!022,\!026,\!031,\!043,\!058,\!063,\!072,\!109,\!110,\!111,\!112,\!113,\!143,\!148,\!151,\!163,\!175,\!183, \\ 238,\!250,\!265,\!267,\!295,\!324,\!323,\!333,\!418,\!448,\!558,\!125 \\ 149,\!155 \\ 005,\!007,\!011,\!015,\!019,\!024,\!025,\!032,\!033,\!035,\!037,\!039,\!041,\!046,\!064,\!091,\!115,\!127,\!149,\!221,\!226 \\ 250,\!319 \\ 103,\!105,\!239,\!240,\!265,\!256,\!334,\!339,\!344,\!345,\!348,\!512,\!490,\!385,\!391,\!211 \\ 235,\!239,\!318,\!323,\!324,\!325,\!326,\!327,\!331,\!333,\!334,\!344,\!238,\!380,\!404,\!506,\!512,\!551, \\ 558,\!560,\!570,\!583,\!116 \\ \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo SBR Schneider Scotth Scott Sears	$\begin{array}{c} 489,241 \\ 038 \\ 022 \\ 3165,566,441 \\ 000,005,032,046,064,065,072,082,088,107,115,136,166 \\ 009 \\ 004,006,028,031,085,102,163 \\ 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230, \\ 000,004,007,008,024,029,030,036,042,091 \\ 045,204,233,354,449 \\ 026,033,042,140,141,151,156,190,193,204,208,247,256,268,296,318,334,348,354, \\ 355,497,503,506,518,583,385,386,417,449,416,458,462,152,130,146 \\ 204,233 \\ 045,243,3348,354,362,507,519 \\ 013,022,026,031,043,058,063,072,109,110,111,112,113,143,148,151,163,175,183, \\ 238,250,265,267,295,324,323,333,418,448,558,125 \\ 149,15 \\ 005,007,011,015,019,024,025,032,033,035,037,039,041,046,064,091,115,127,149,221,226 \\ 250,319 \\ 103,105,239,240,265,256,334,339,344,345,348,512,490,385,391,211 \\ 235,239,318,323,324,325,326,327,331,333,334,344,238,380,404,506,512,551, \\ 558,560,570,583,116 \\ 093 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo SBR Schneider Scotth Scott Sears SEG SEI	$\begin{array}{c} 489,241 \\ 038 \\ 022 \\ 3165,566,441 \\ 000,005,032,046,064,065,072,082,088,107,115,136,166 \\ 009 \\ 004,006,028,031,085,102,163 \\ 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230, \\ 000,004,007,008,024,029,030,036,042,091 \\ 045,204,233,354,449 \\ 026,033,042,140,141,151,156,190,193,204,208,247,256,268,296,318,334,348,354, \\ 355,497,503,506,518,583,385,386,417,449,416,458,462,152,130,146 \\ 204,233 \\ 045,243,348,354,362,507,519 \\ 015,022,026,031,043,058,063,072,109,110,111,112,113,143,148,151,163,175,183, \\ 238,250,265,267,295,324,323,333,418,448,558,125 \\ 149,155 \\ 005,007,011,015,019,024,025,032,033,035,037,039,041,046,064,091,115,127,149,221,226 \\ 250,319 \\ 103,105,239,240,265,256,334,339,344,345,348,512,490,385,391,211 \\ 235,239,318,323,324,325,326,327,331,333,334,344,238,380,404,506,512,551, \\ 558,560,570,583,116 \\ 093 \\ 005,032,115,046,064 \end{array}$
Roadstar Rotel Runco SABA Saccs Saisho Salora Sambers Sampo Samsung Samsux Sansui Sanyo SBR Schneider Scotth Scott Sears	$\begin{array}{c} 489,241 \\ 038 \\ 022 \\ 3165,566,441 \\ 000,005,032,046,064,065,072,082,088,107,115,136,166 \\ 009 \\ 004,006,028,031,085,102,163 \\ 005,046,047,054,063,064,066,067,073,079,083,094,127,138,143,158,175,215,216,230, \\ 000,004,007,008,024,029,030,036,042,091 \\ 045,204,233,354,449 \\ 026,033,042,140,141,151,156,190,193,204,208,247,256,268,296,318,334,348,354, \\ 355,497,503,506,518,583,385,386,417,449,416,458,462,152,130,146 \\ 204,233 \\ 045,243,3348,354,362,507,519 \\ 013,022,026,031,043,058,063,072,109,110,111,112,113,143,148,151,163,175,183, \\ 238,250,265,267,295,324,323,333,418,448,558,125 \\ 149,15 \\ 005,007,011,015,019,024,025,032,033,035,037,039,041,046,064,091,115,127,149,221,226 \\ 250,319 \\ 103,105,239,240,265,256,334,339,344,345,348,512,490,385,391,211 \\ 235,239,318,323,324,325,326,327,331,333,334,344,238,380,404,506,512,551, \\ 558,560,570,583,116 \\ 093 \end{array}$

Sharp	022,038,043,053,065,109,114,178,201,171,204,233,565,576,582,487,498,499,
Sharp	449,385,395,419,420
Shogun	250,319
Siarem	000,025,029,136
Sicatel	001,009,022,065
Siemens	010
Siesta	220
Signature 2000	904,903,912,318,319,320,329,334,336,344,347,381,408,578,902,253,257,098
Silver	141,208
Simpson	242,328,353,074
Singer	025,029, 131,136
Sinudyne	005,006,016,025,026,029,031,032,046,056,064,115,136,172,177,219,
Sonic	489
Sonoko	208
Sony	028,109,005,117,118,119,120,163,179,224,123,231,245,330,364,365,369,539,382,
	463,466,469,460,087
SounDesign	105, 334,339,344,353,239,240,512
Spectravision	587,360
Squareview	551,116
SSS	105,240,339
Starlite	105,240,339
Stern	075,076,127
Sunkai	005,032,115,046,064
Super - Macy	204,353,376,501,450
Supreme	231,327,365,371,382,087
Sylvania	045,247,255,256,327,328,332,341,342,353,354,235,546,551,568,583,584,421,446,
	515,474,536,476,222
Symphonic	231,265,281,314,398,476,551,485,222,116
Tandberg	114,219,228
Tandy	065,257,487
Tao Wah	196,197
Tatung	002,004,026,028,031,321,484
Teac	222
Technics	321,322,493
TechnolAce	239
Techwood	322,493
Teknika	094,105,233,235,240,245,318,327,335,336,344,353,363,376,239,501,506,512,
T 1 + 1	515,385,408,449,222,135
Tele+1	214
Teleavia	005,032,046,064,072,115,166
Telefunken	065,072,088,165,166,168
Telerent Teleservice	318,336 181,212
Tera	385,412,522
Thomas	222
Thomson	065,075,166,088,005,032,046,064,072,168
Thorn- Ferguson	001,005,009,032,042,046,064,115,122,141,166,208
TMK	903,905,165,258,267,334,359
Toshiba	022,043,091,109,123,124,130,126,137,029,030,139,257,261,268,293,300,301,
TOSHIDA	325,326,332,333,348,362,375,506,477,550,458,135
Tosnic	241
Totevision	233.449
Uher	007,011,012,024,033,035,036,037,075,091,192,221
Ultravox	003,007,024,025,079,091,093,129,136
Universal	091,141,199,026
Universum	026,091,141,199
Univox	001,009
Vector Research	045,354
Vegavox	150
Victor	234,270,404
Videosonic	222
Vidikron	235
Vidtech	247,256,273,334
Viking	204,376,450,501
Vortec	026,065
Voxson	005,007,024,032,046,064,091,115,127,136
Waltham	005,032,046,064,115
Wards	235,239,247,256,258,327,328,329,334,336,341,546,548,560,573,512,515,536,380,
	381,391,398,408,422,423,583,490,222,318,319,320,342,344,098,171
Watson	036
Watt Radio	001,003,025,029,030,056
Wega Color	109,127,043
	* *
Weltblick	026

White Westinghouse	003,026,036,140,243,244,557,029,030
XR-1000	222
Yamaha	045,583
Yoko	004,033,140
Yorx	334
Zanussi	005,026,032,046,064,075,076,115,
Zenith	181,243,253,254,316,336,363,367,368,494,507,519,534,566,578,408,442,443,468
Zonda	360
Zoppas	005,032,046,064,115

Brand of SAT	
AlphsStar 127 American High 063 Amstrad 000,001,032,107,053 Ankaro 002 Apollo 026 Astra 001,033,107 Aura 053,106 Barcom 002 Benjamin 089 BEST 075 Bush 060,026 Cambridge 004 Canon 063 Carver 063 Chaparral 003 Columbus 042 Crosley 063 Curtis mathes 063 DNT 033,051,053,106 Drake 145,067,068,069,134,143 Dynasat 110,111 Echostar 006,008,014,033,035,036,079,080,115,082,083,105,00 Emme Esse 084,085,086 Eurostar 086 Eurostar 086 Eurostar 006,008,014,033,035,036,079,080,115,082,083,105,00 Finlux 039 Freceom 044 Expressvu 128<	
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Apollo 026 Astra 001,033,107 Aura 053,106 Barcom 002 Benjamin 089 BEST 075 Bush 060,026 Cambridge 004 Canon 063 Carver 063 Chaparral 003 Columbus 042 Crosley 063 Curtis mathes 063 DNT 033,051,053,106 Drake 145,067,068,069,134,143 Dynasat 110,111 Echostar 006,008,014,033,035,036,079,080,115,082,083,105,00 Emme Esse 084,085,086 Eurostar 086 Eurostar 086 Eursky 044 Expressvu 128 Finlux 039 Fracarro 009,002 Freecom 049 FTE 025 Fuba 037,042 Fuji 063 GE 063,146,010,020,027 General Instruments 148,118,121,133,761 General Electrc 005 Giucar Record 040 Grunding 011,026,104 Haier 114 Hirschman 039,049 Hitachi 103,130,029,030 HTS 128	-
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Aura 053,106 Barcom 002 Benjamin 089 BEST 075 Bush 060,026 Cambridge 004 Canon 063 Chaparral 003 Columbus 042 Crosley 063 Curtis mathes 063 DNT 033,051,053,106 Drake 145,067,068,069,134,143 Dynasat 110,111 Echostar 006,008,014,033,035,036,079,080,115,082,083,105,00 Emme Esse 084,085,086 Eurostar 086 Eursky 044 Expressvu 128 Finlux 039 Freecom 049 FTE 025 Fuba 037,042 Fuji 063 GE 063,146,010,020,027 General Instruments 148,118,121,133,761 General Electrc 005 Giucar Record 040 Grunding 011,026,104 <t< td=""><td></td></t<>	
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Hitachi 103,130,029,030 HTS 128	
HTS 128	
Hughes Newtwork Sys 126 038 055	
1145140 114 114 076 120,000,000	
Huth 044,099	
ITT-Nokia 026,013,041	
Jeemon 014	
Jerrold 118,121	
Johansson 015,001	
JVC 128	
Kathrein 016,018,042,090,004	
Kodak 063	
Kosmos 004	
Kyostar 023	
Lenco 046,049,100,101,102	
Leng 001	
Luxor 056,019,026	
Macom 066	
Magnavox 124,125,063,141,144,034	
Marantz 063	
Maspro 016,021,026,109,001	
Maxab 043	7

Lenco	046,049,100,101,102
Leng	001
Luxor	056,019,026
Macom	066
Magnavox	124,125,063,141,144,034
Marantz	063
Maspro	016,021,026,109,001
Maxab	043
MEI	063
Memorex	125,063
Metz	011
Mina	113
Minerva	011,104
Mitsubishi	108
Morgans	044,018
Motorolat NEC	063 045,098,112,062,051
Neckermann	044
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Next Level	133
Nokia	026
Norsat	051
Obritech	049
Olympus Pace	063
	026,009,139,142
Palcom	022,042
Palladium	044
Palsat	046
Panasonic	116,054,123,766,063
Pansat	077
Penny	063
Philico	063
Philips	026,047,048,097,045,112,124,125,141,144,063,034
Philips/Magnavox	141,144
Pioneer	094,135
Primestat	118,121,076
Prosat	099,073
Proscan	146,010,020,027
Quasar	063
Quelle	011
Radix shack	133
Radix	033,051,053,106
RCA	072,117,119,120,131,010,020,027,061
RC-AK	078
Realistic	063
Rediffusion	062,051
Sakura	023,024,052,033
Salora	019,041,026,035
Samsung	081,095,096,046,049,136
SAT100	001,107
Sateco	049,026
Scientific Atlanta	074
Sears	063
Sharp	137
Siemens	011
Sintrack	050
Skymaster	099
Sony	093,025,122,761,063,012,057
Star Choice	133,091
Strong	025,046,049,100,023
STS	021
STV	037
Sylvania	063
Tada	070
Tantec	022,042
Technics	063
Technisat	033,051,052,053,054,106,035,088
Tedelex	087,
Teknika	092
Telemax	016
Telemeister	024,033,051,053,090,106
Thomas	063
	026
Thorn- Ferguson	
Toshiba	064,066,129,007,017
Toshiba Unided Satellite	064,066,129,007,017 062
Toshiba Unided Satellite Uniden	064,066,129,007,017 062 125,028,124,065,026,000,096,095
Toshiba Unided Satellite	064,066,129,007,017 062

Brand of CABLE	CODE
ABC	024,038,039,041,042,058,065,088,101,102
Adelphia	069
Aeon	004
Allegro	031,033,063
Americast Antronix	073 045
APO	018
Archer	036,045
Asiagiant	003,015
AT&T	082
Bell&howell	038
BEST	001
Cabletenna Cableview	045 045
Cantury	031
Citizen	031
Colour Voice	046,047
Comtronics	028
Contec/Cony	066,043,089
Eastern	009,010,011,012
Emerson	036
Everquest Garrard	027,028 031
Garrard	055
Gemini	027,036,054,048
General Instrument	060,077,082,042
GMI	017,020,021
Goldster/LG	030
Goodmind	036
Hamlin	025,078,081,090
Hughes Hytex	038 024
IEEC	008,016
Jasco	027,033
Jebsee	000
Jeemon	038
Jerrold/GI	037,038,101,102,103,104,042,099,058,077,082
Koka	004,007
Movie Time	070,029,091
NSC OAK	029,070,091 002,024,043,066,076,092,089
Panasonic	056,044,051
Philips	031,054,046,047,048,105
Philips/Magnavox	061,062
Pioneer	030,035,075,084,049,093
Radio Shack	061,062,063,027,033,036
RCA	056,044,050
Recoton Rembrandt	034 038
Samsung	028,030,049
Scientific Atlanta	064,065,067,069, 071,075,074,039,040,094,095,096
Sigma	043
Signal	027,028
Signature	038
Skygiant	013,014
Slmarx	028
Sprucer Standard Components	044,056 097
Star Trak	068
Starcom	027,042,102
Stargate	027,028,036
Starquest	027
Tada	023
Taicom	004
Tandy	079
Tay Shoen Telemedia	008,019 038
Teleview	028
Tocom	026,041,058,088,103
	022
Toshiba	1 022
Toshiba Tusa	027
Tusa TV86	027 029,070,091
Tusa TV86 United cable	027 029,070,091 042
Tusa TV86	027 029,070,091

Hisense

Appendix

Cleaning and care

WARNING: Do not try to remove the cabinet back. Refer servicing to qualified service technicians.

To clean the TV screen:

- 1) Unplug the TV to avoid possible shock hazard.
- 2) Use a clean cellulose sponge or chamois cloth dampened with a solution of mild detergent and warm water to clean the TV screen and trim. Do not use too much water as water spilled into the cabinet can cause damage to the TV.
- 3) Wipe off any excess moisture with a clean dry cloth.
- 4) Polish the cabinet with a quality furniture polish to maintain the finish and appearance of the cabinet.

Caution: Never use strong solvents such as thinner, benzene, or other chemicals on or near the cabinet.

These chemicals can damage the finish of the cabinet.

Appendix

Troubleshooting

Before calling a service technician, please check the following table for a possible cause of the problem and some solutions.

Symptoms	Possible Solutions				
TV will not turn on	Make sure the power cord is plugged in, then press [POWER]. The remote control batteries may be dead. Replace the batteries.				
No picture, no sound	Check if you have set the off timer. Check the antenna/cable connections. Press [DISPLAY] to see if you have select the right signal source.				
No sound, picture OK	The sound may be muted. Press [>] on the remote control or. The station may have broadcast difficulties. Try another channel. Check the speakers cable connections.				
Poor sound, picture OK	The station may have broadcast difficulties. Try another channel				
Poor picture, sound OK	Check the antenna connections. The station may have broadcast difficulties. Try another channel. Adjust the picture from the menu.				
Unable to select a certain channel	The channel may be skipped. See SKIP on page 14.				
Poor color or no color	The station may have broadcast difficulties. Try another channel. Adjust the HUE and COLOR in the menu.				
The remote control does not operate	There may be an obstruction between the remote control and the remote control sensor. The batteries may be installed with a wrong polarity. The remote control batteries may be dead. Replace the batteries.				
Disorder display at power on	This may be caused by too short interval between power off and on. Unplug the power and restart.				

Appendix

Specifications

	TL3220						
Diagonal display size	32 inches						
Television system	NTSC standard						
Channel coverage	VHF: 2~13 UHF	: 14-69 Cable TV	: 2~13,A	~W,	W+1~W+84, A-5~A-1, 4A		
Power source	120VAC, 60Hz						
Power consumption	160W						
Audio power	5W+5W						
Conection Interface	RF input: VIDEO input: VGA: DVI: VIDEO output: AUDIO input: AUDIO input: Other:	Cable/ antenna Rivideo ×1 S-VIDEO ×1 YPbPr/YCbCr ×1	Y: C: YCbCr: 60Hz,720 n ×1 ,SXGAs n ×1 ,SXGAs dio×1 i-jack(3.	75 75 75 75 0P/6 75 igna 75 igna >10	0.286Vp-p input 1.0Vp-p input 1.0Vp-p input 0Hz,1080i/60Hz) 0.70Vp-p input I) 0.70Vp-p input I) 0.70Vp-p input I)		
Dimensions	Width: 1036mm Height: 675mm Depth: 370mm						
Weight	51lbs						
Supplied accessories	Remote control,	ACcord,Batteries					

Design and specifications are subject to change without notice.

CUSTOMER NOTICE: Operate carefully to prevent damage to the screen.

HISENSE HOME ENTERTAINMENT WARRANTY

We appreciate your purchase of a HISENSE Home Entertainment product. We take pride in the quality of our products and have manufactured your new Home Entertainment unit to exacting quality standards. We feel confident that in normal use, it will provide you with satisfactory performance. However, should you experience difficulty, you are protected under the provisions of this warranty.

HISENSE Home Entertainment products are warranted against manufacturing defects in materials and workmanship in normal use for the following period from the date of purchase by the original user, and is conditional upon the unit being installed and used as directed in the instruction manual.

LCD TV

Parts and Labour 1 Year

Remote Control 90 Days Parts and

Labour

HISENSE's obligation under this warranty shall be limited to the repair, including all necessary parts and the cost of the labour connected therewith, or at our option the exchange of any Home Entertainment product which shows evidence of a manufacturing defect within the warranty period.

Replacement parts, furnished in connection with this warranty shall be warranted for a period equal to the unexpired portion of the original equipment warranty.

CUSTOMER OBLIGATIONS

This warranty applies to the product from the original date of purchase at retail. Therefore, the owner must provide a copy of the original, dated bill of sale. No warranty service will be performed without a bill of sale. Transportation to and from the service depot is the responsibility of the owner.

WARRANTY EXCLUSIONS

This warranty is extended to HISENSE Home Entertainment products purchased and used in Canada. This warranty shall not apply to appearance or accessory items including but not limited to: antenna, cabinet, cabinet parts, knobs, batteries, connecting cables, cassette tapes, compact discs. This warranty shall, in addition, not apply to damages due to handling, transportation, unpacking, set-up, installation, customer adjustments that are covered in the instruction book, repair or replacement of parts supplied by other than the HISENSE authorized service depot, any malfunction or failure caused by or resulting from abnormal environmental conditions, improper unauthorized service, improper maintenance, modifications or repair by the consumer, abuse, misuse, neglect, accident, fire, flood, or other Acts of God, and incorrect line voltage.

This Home Entertainment product is only warranted to the original retail purchaser. This warranty becomes void in the event of commercial or rental use. This warranty becomes void in the event serial numbers are altered, defaced or removed.

HISENSE reserves the right to make changes in design or to make additions to or improvements upon this product without incurring any obligation to install the same on products previously manufactured. The foregoing is in lieu of all other warranties expressed or implied and HISENSE neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale or service of this product. In no event shall HISENSE or its HISENSE dealers be liable for special or consequential damage arising from the use of this product, or for any delay in the performance of this warranty due to cause beyond our control.

The purchaser may have other rights under existing provincial or federal laws, and where any terms of this warranty are prohibited by such laws, they are deemed null and void, but the remainder of the warranty shall remain in effect.

HOW TO OBTAIN SERVICE

Should this product require service, you may obtain specific information on how to obtain service by contacting the HISENSE Dealer from whom this product was purchased, or by contacting us directly:

SONI GEM SERVI CE

300 Alden Road Markham, Ontario L3R 4C1

PHONE: (905) 940-5089 FAX: (905) 940-2303

1-800-287-4871